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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,115	10/02/2003	Lien-Jin Chiang	CHIA3057/EM	6034
23364 7590 04/23/2007 BACON & THOMAS, PLLC 625 SLATERS LANE FOURTH FLOOR ALEXANDRIA, VA 22314			EXAMINER BUI, HUNG S	
			ART UNIT	PAPER NUMBER
			2841	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/23/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/676,115

Applicant(s)

CHIANG ET AL.

Examiner

Hung S. Bui

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 7 and 9-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4-6 and 8 is/are rejected.
- 7) ☒ Claim(s) 2 and 3 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01/03/2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

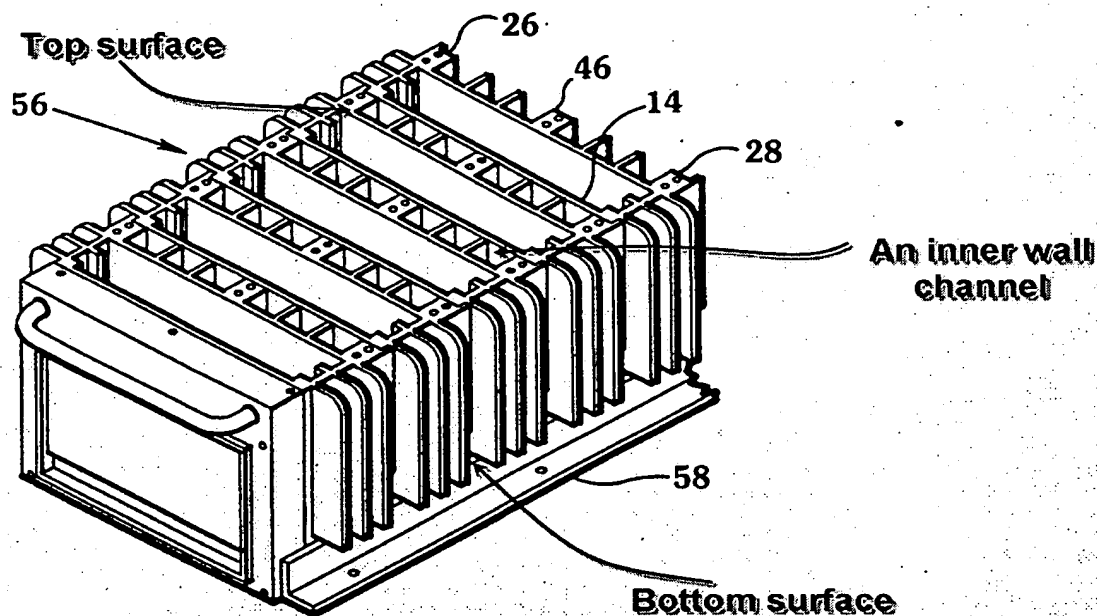
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 6 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Harris et al. [US 4,953,058].

Regarding claim 1, Harris et al. disclose an electronic apparatus (figures 2-6) with natural convection structure, comprising:

- a main body (56, figures 5-6, column 5, line 57, combining a plurality of segments as shown in figures 3 and 4) to be placed on a surface, the main body having an airflow channel piercing through the main body (airflow as shown in figure 2) from a top surface to a bottom surface (see attached figure below) thereof, wherein the airflow channel is formed by an inner wall (in a combination of a plurality of sealed segments that makes a plurality of inner wall pipes as shown in the attached figure below) that extending from the top surface to the bottom surface;
- at least a printed circuit board (62, figure 6, column 6, line 8) disposed in the main body; and
- a supporting device (58, figures 5-6, column 5, line 58) disposed on the bottom surface of the main body.



**FIG. 5**

Regarding claim 6, Harris et al. further disclose wherein the distances from the airflow channel to the edges of the main body are substantially equal (figures 5-6).

Regarding claim 8, Harris et al. disclose wherein the surface of the main body and the airflow channel are integrally formed (figures 5-6).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harris et al.

Regarding claim 4, Harris et al. disclose the instant claimed invention except for the specific height of the supporting device is at least 3 mm.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to design the specific height of the supporting device to be provided for the electronic apparatus, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F 2d 272, 205 USPQ 215 (CCPA 1980).

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harris et al. in view of Chuang [US 2004/0095713].

Regarding claim 5, Harris et al. disclose the instant claimed invention except for the electronic apparatus being formed of a power supply.

Chuang discloses an electronic apparatus (3, figure 3, page 1, paragraph 0016, line 2) having a plurality of ventilation holes (34) mounted thereon and being formed of a power supply.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to form the electronic apparatus of Harris et al., for a power supply, as suggested by Chuang, for the purpose of dissipating heat quickly from the components of the power supply.

***Allowable Subject Matter***

6. Claims 2-3 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: Claim 2 states that the limitation "wherein said printed circuit board has an opening, and the centroids of said opening and said airflow channel are positioned at the same axis vertical to said top surface and said bottom surface." This limitation in conjunction with the previous claimed limitation of the claim 1, was neither found to be disclosed, nor suggested in the prior art. Claim 3 depends on the claim 2.

***Response to Arguments***

7. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Yazawa [US 7,099,153] discloses heat dissipating structure for an electronic device; and
- Ito [US 5,089,935] discloses a control device case.

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9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung S. Bui whose telephone number is (571) 272-2102. The examiner can normally be reached on Monday-Friday 8:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean A Reichard can be reached on (571) 272-1984. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

04/09/2007

**Hung Bui**

**Art Unit 2841**

  
DEAN A. REICHARD  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800 4/16/07